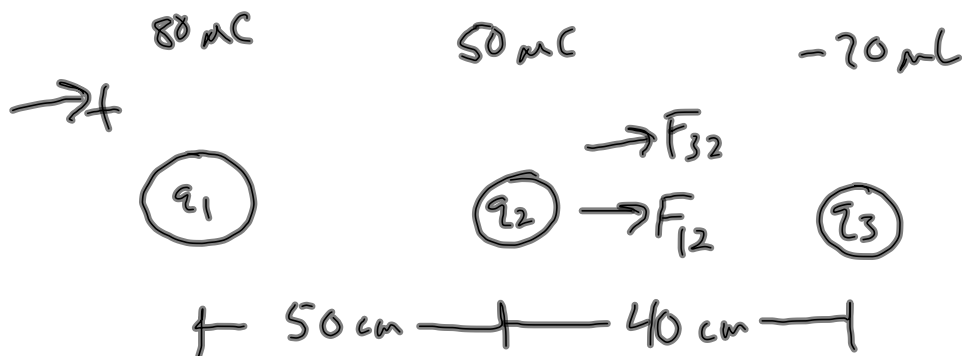


Three charges in a line. Far left = $80 \mu\text{C}$,
 50 cm from middle. Middle = $50 \mu\text{C}$.
 Far right = $-70 \mu\text{C}$, 40 cm from middle.
 Find net force on middle.



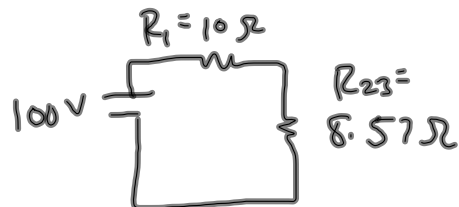
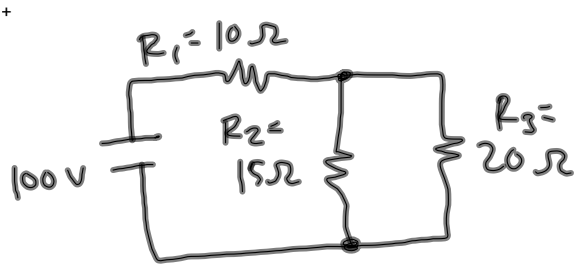
$$\Sigma \vec{F}_2 = \vec{F}_{12} + \vec{F}_{32}$$

$$= \frac{k |q_1| |q_2|}{r_{12}^2} + \frac{k |q_3| |q_2|}{r_{32}^2}$$

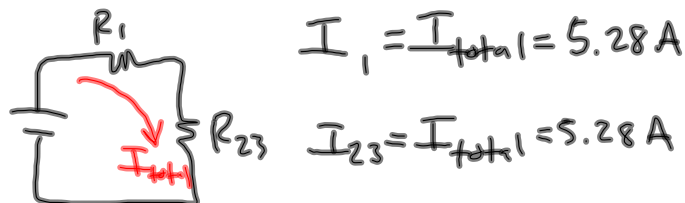
$$= \frac{k(80 \times 10^{-6} \text{C})(50 \times 10^{-6} \text{C})}{(.50 \text{ m})^2} + \frac{k(70 \times 10^{-6} \text{C})(50 \times 10^{-6} \text{C})}{(.40 \text{ m})^2}$$

$$= 340.5 \text{ N}$$

Final Exam Review 5.21.12 Honors Physics



$$I_{\text{total}} = \frac{100 \text{ V}}{18.57 \Omega} = 5.28 \text{ A}$$

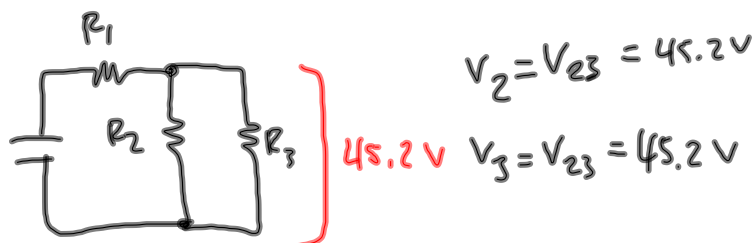


$$I_1 = I_{\text{total}} = 5.28 \text{ A}$$

$$I_{23} = I_{\text{total}} = 5.28 \text{ A}$$

$$V_1 = I_1 R_1 = 52.8 \text{ V}$$

$$V_{23} = I_{23} R_{23} = 45.2 \text{ V}$$



$$V_2 = V_{23} = 45.2 \text{ V}$$

$$V_3 = V_{23} = 45.2 \text{ V}$$

$$I_2 = \frac{V_2}{R_2} = 3.01 \text{ A}$$

$$I_3 = \frac{V_3}{R_3} = 2.26 \text{ A}$$